

REMARKS

Claims 2-9, 41, 43-54 and 57-77 are pending. Claims 2-9, 41, 43-54 and 68-76 were rejected under 35 U.S.C. § 102. Claims 57-67 and 77 were rejected under 35 U.S.C. § 103. Reconsideration and allowance of Claims 2-9, 41, 43-54 and 57-77 is requested.

Rejection of Claims under 35 U.S.C. § 102

In the Office Action, Claims 2-9, 41, 43-54 and 68-76 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,168,151 issued to Nara.

Nara teaches (column 1, lines 43-50 of the Nara patent):

A portable electronic device of the present invention comprises a control element, and a memory means, and is used in an on- or off-line mode. The memory means has a nonrewritable first memory area for storing basic functions of the device, and a rewritable second memory area for storing a user application program. Access to the second memory area is enabled in the on-line mode but is disabled in the off-line mode.

Nara further teaches that the portable electronic device can be, in particular, an IC card (see, e.g., column 2, lines 14-19 of the Nara patent and ensuing description). Nara also describes an IC card reader/writer into which can be inserted an IC card in accordance with the invention of Nara (see, e.g., column 3, lines 19-27 of the Nara patent); however, Nara provides little detail regarding the construction and operation of such an IC card reader/writer. It is the IC card reader/writer described by Nara, rather than the IC card, that is analogous to the integrated circuit card interface device of the instant

application. As discussed in more detail below, the Office Action incorrectly identifies aspects of an IC card taught by Nara as representing elements of an integrated circuit card interface device as recited in the claims of this application.

Regarding Claim 69, the Office Action states:

Nara teaches the invention as claimed including a portable integrated circuit card interface device (an IC card reader/writer 16; col. 3, lines 19-20 and fig. 3), comprising:

- means for operably connecting (electrically connected to ... when inserted from card slot) the interface device to an integrated circuit card (IC card 10) to enable communication (reads or writes data from or in a memory of IC card 10) between the interface device and the integrated circuit card (see fig. 3 and col. 3, lines 21-27);

- means for operably connecting (connected to) the interface device to a host device (a terminal/a personal computer) to enable communication between the interface device and the host device (see fig. 3 and col. 3, lines 21-27);

- means for operating (off-line function) the interface device in a standalone mode (standalone mode) in which the interface device is not operably connected (being disconnected from) to a host device (a terminal/a personal computer/an external apparatus) to enable communication between the interface device and the host device (col. 2, lines 17-33; col. 4, lines 46-51; and col. 7, lines 60-67); and

- means for operating (on-line function) the interface device in a connected mode (on-line mode) in which the interface device is operably connected to (connected to) a host device (a terminal/a personal computer/an external apparatus) to enable communication between the interface device and the host device (col. 2, lines 17-33; col. 3, lines 27-28; col. 4, lines 46-51; and col. 7, lines 60-67).

Claim 69 recites (emphasis added):

A portable integrated circuit card interface device, comprising:

- means for operably connecting the interface device to an integrated circuit card to enable communication between the interface device and the integrated circuit card;

- means for operably connecting the interface device to a host device to enable communication between the interface device and the host device;

means for operating the interface device in a standalone mode in which the interface device is not operably connected to a host device to enable communication between the interface device and the host device; and

means for operating the interface device in a connected mode in which the interface device is operably connected to a host device to enable communication between the interface device and the host device.

Nara does not teach or suggest an integrated circuit card interface device as recited in Claim 69. In particular, Nara does not teach or suggest an integrated circuit card interface device including "means for operating the interface device in a standalone mode in which the interface device is not operably connected to a host device to enable communication between the interface device and the host device," as recited in Claim 69. The Office Action indicates that such means is taught at column 2, lines 17-33; column 4, lines 46-51; and column 7, lines 60-67 of the Nara patent. However, that is not the case. In fact, Nara does not directly teach operation in any particular mode of the IC card reader/writer described in the Nara patent. Rather, Nara teaches operation of an IC card in an on-line mode or an off-line mode. For example, Nara teaches at column 2, lines 17-24 of the Nara patent:

In FIG. 2, reference numeral 10 denotes an IC card as a portable electronic device For example, IC card 10 has an on-line function (on-line mode) used with a terminal (not shown), an off-line function (off-line mode) in which IC card 10 is solely operated, and a standby state wherein only a timepiece function is enabled.

Nara teaches that, when the IC card is operated in the on-line mode, the IC card is inserted into the IC card reader/writer

to enable communication between the IC card and external apparatus such as a personal computer to which the IC card reader/writer is connected (see, e.g., col. 3, lines 19-27 of the Nara patent). Since the IC card reader/writer is connected to external apparatus to enable communication therebetween, operation in on-line mode is not operation in standalone mode as in Claim 69. Further, Nara does not teach that the IC card is inserted into the IC card reader/writer during operation of the IC card in off-line mode (when the IC card is operated without communication with external apparatus such as a personal computer). In fact, the Nara patent does not first mention the IC card reader/writer (column 3, lines 19-27 of the Nara patent) until after detailed discussion of operation of the IC card in off-line mode (column 2, lines 25-41 of the Nara patent), indicating that the IC card reader/writer is not part of that mode of operation. Nor does Nara teach that the IC card reader/writer is operable when an IC card is not inserted therein. In short, Nara does not teach that the IC card reader/writer described therein can be operable when not operably connected to an external apparatus such as a personal computer (i.e., an apparatus that can be characterized as a host device) to enable communication therebetween.

Contrary to the assertion in the Office Action, column 2, lines 17-33 of the Nara patent does not describe "means for operating [an] interface device in a standalone mode," as recited in Claim 69, but, rather, operation of an IC card in an on-line mode (which, as discussed above, is not operation of an

integrated circuit card interface device in a standalone mode as in Claim 69) or an off-line mode (which is not taught by Nara to include insertion of the IC card into an IC card reader/writer and therefore also is not operation of an integrated circuit card interface device in a standalone mode, as in Claim 69).

Column 4, lines 46-51 of the Nara patent also does not describe such means, but, instead, describes the salient characteristic of operation of the portable electronic device (e.g., IC card) taught by Nara, which is that read/write access to a part of the data memory of the device is disabled in off-line mode and enabled in on-line mode. Nor does column 7, lines 60-67 (Claim 1) of the Nara patent describe such means. Instead, that section of the Nara patent teaches yet again, as discussed above, that the portable electronic device described therein has an on-line mode in which the device is operated while connected to an external apparatus and an off-line mode in which the device is operated while not connected to external apparatus.

As can be seen, then, Nara does not teach or suggest an integrated circuit card interface device including "means for operating the interface device in a standalone mode in which the interface device is not operably connected to a host device to enable communication between the interface device and the host device," as recited in Claim 69, and therefore Claim 69 is allowable over the teaching of Nara. Further, Claims 70-76, which each depend on Claim 69, either directly or indirectly, are allowable as dependent on an allowable claim.

Regarding Claim 43, the Office Action states:

[T]he rejection of claim 69 above is incorporated herein in full. Additionally, Nara further teaches:

- an application memory (data memory 31 ... storing a user application program; col. 3, lines 53-57; col. 4, lines 25-40 and fig. 3);
- an application engine for managing one or more applications in said application memory (reads or writes data from or in memory; col. 3, lines 20-27);
- an input/output module (I/O signals supplied from I/C card reader/writer 16; col. 3, lines 52-67);
- a host interface (IC card reader/writer 16 connected to a terminal ... connected to main body of a personal computer PC; col. 3, lines 27-28 and fig. 3); and
- one or more integrated circuit card interfaces (I/C card reader/writer 16 is electronically connected to contacts portion 11 of IC card 10; col. 3, lines 19-25 and fig. 3).

Claim 43 recites (emphasis added):

An integrated circuit card interface device, comprising:

- an application memory;
- an application engine for managing one or more applications in said application memory;
- an input/output module;
- a host interface; and
- one or more integrated circuit card interfaces;

wherein the interface device is adapted to enable operation in accordance with multiple modes of operation, the multiple modes of operation comprising a standalone mode of operation in which the interface device is not operably connected to a host device via the host interface.

Nara does not teach or suggest an integrated circuit card interface device as recited in Claim 43. First, as discussed above with respect to Claim 69, Nara does not teach or suggest an integrated circuit card interface device that "is adapted to enable operation in ... a standalone mode of operation in which the interface device is not operably connected to a host device via the host interface," as recited in Claim 43.

Additionally, Nara does not teach or suggest an integrated circuit card interface device including an application memory, application engine and/or input/output module as recited in Claim 43. For example, the Office Action indicates that the data memory 31 taught by Nara is an application memory as recited in Claim 43. However, the data memory 31 is part of an IC card, not an IC card reader/writer, as can be seen, for example, in FIG. 1 of the Nara patent. Similarly, the Office Action indicates that an application engine and input/output module as recited in Claim 43 are taught at column 3, lines 20-27 and lines 52-67, respectively, of the Nara patent. However, again, that teaching of the Nara patent concerns an IC card, not an IC card reader/writer. As discussed in Applicants' specification at page 7, lines 1-4, "the functionality of [an] interface device ... according to the present invention can be shared between [an] application engine ... and [an] input/output (I/O) module" For instance, as described in Applicants' specification at page 8, line 19 to page 9, line 2:

Application engine 240 can contain application engine control program 340, which can control the operation of the various applications contained in application memory 342. ... Application engine 240 can further be used to store personalization data, including, for example, a user name, a user pin number, and other kinds of user-related records.

I/O module 260 can contain security block 330, command buffer 362, and I/O control program 364. I/O control program 364 can control the flow of data to and from the various interfaces, such as LCD interface 360, keypad interface 370, and smart card interface 380. In addition, I/O module 260 can control all resident applications including, but not limited to, the clock, the calculator, and the power management functionality.

Nara does not teach that an IC card reader/writer as described therein can include such functionality.

As can be appreciated from the above remarks, Nara does not teach or suggest an integrated circuit card interface device as recited in Claim 43 and therefore Claim 43 is allowable over the teaching of Nara. Further, Claims 2-9, 41, 44-54 and 68, which each depend on Claim 43, either directly or indirectly, are allowable as dependent on an allowable claim.

In view of the foregoing, it is requested that the rejection of Claims 2-9, 41, 43-54 and 68-76 under 35 U.S.C. § 102 be withdrawn.

Rejection of Claims under 35 U.S.C. § 103

In the Office Action, Claims 57-67 and 77 were rejected under 35 U.S.C. § 103 as unpatentable over U.S. Patent No. 5,168,151 issued to Nara in view of U.S. Patent No. 5,905,245 issued to Tanaka. Regarding Claim 57, the Office Action states:

[T]he rejections of claims 43 and 69 are incorporated herein in full. Nara does teach the interface device (an IC card reader/writer 16; col. 3, lines 19-20 and fig. 3). Nara, however, does not specifically teach enable one or more programs to be added to, and/or deleted from, the interface device.

Tanaka teaches enable one or more programs to be added to, and/or deleted from, the interface device (the IC card reading/writing control unit has ... a pass-through function to control read-out/write-in processing for the IC card by an application unit in a host for the IC card reading/writing apparatus by receiving a pass-through command from the host; see the Abstract; col. 5, lines 50-53; and col. 7, line 52 - col. 8, line 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Tanaka and Nara because Tanaka's teaching would have provided the capability for simplifying the configuration of the IC card system, and largely reducing the cost required to build the system and contribute to flexibility of the configuration of the system.

Claim 57 recites:

An integrated circuit card interface device, comprising:

- an application memory;
- an application engine for managing one or more applications in said application memory;
- an input/output module;
- a host interface; and
- one or more integrated circuit card interfaces;

wherein the interface device is adapted to enable operation in accordance with multiple modes of operation, the multiple modes of operation comprising a programming mode of operation in which the interface device is operably connected to an integrated circuit card via one of the one or more integrated circuit card interfaces, and/or to a host device via the host interface, to enable one or more programs to be added to, and/or deleted from, the interface device.

Nara and Tanaka do not teach or suggest an integrated circuit card interface device as recited in Claim 57, either alone or in combination. As discussed above with respect to Claim 43, Nara does not teach or suggest an integrated circuit card interface device including an application memory, application engine and/or input/output module as recited in Claim 57. Further, the Office Action does not contend that Tanaka teaches or suggests, either alone or in combination with the teaching of Nara, such an integrated circuit card interface device.

Moreover, contrary to the contention in the Office Action, Tanaka does not appear to teach or suggest an integrated circuit card interface device that "is adapted to enable operation in accordance with ... a programming mode of operation in which the interface device is operably connected to an integrated circuit card via one of the one or more integrated circuit card interfaces, and/or to a host device via the host interface, to enable one or more programs to be added to, and/or deleted from, the interface device," as recited in Claim 57. The Office Action indicates that operation of an integrated circuit card interface device in accordance with a programming mode of operation is taught in the Abstract, at column 5, lines 50-53, and at column 7, line 52 to column 8, line 4 of the Tanaka patent. However, that is not the case. For example, the Abstract of the Tanaka patent teaches:

An IC card reading/writing apparatus has an IC card reading/writing control unit having an intelligent function to control read-out/write-in processing for an IC card by an application unit in the IC card reading/writing apparatus. The IC card reading/writing control unit has, in addition to the intelligent function, a pass-through function to control read out/write-in processing for the IC card by an application unit in a host for the IC card reading/writing apparatus by receiving a pass-through command from the host. With this arrangement, the IC card reading/writing apparatus can execute readout/write-in processing for the IC card with either the intelligent function or the pass-through function, thereby minimizing the cost required to configure an IC card system.

The teaching at column 5, lines 50-53 and at column 7, line 52 to column 8, line 4 of the Tanaka patent is in the same vein. This teaching of Tanaka concerns the apparatus in which an application

unit that controls read-out/write-in processing for an IC card is stored, and whether an IC card reading/writing apparatus can enable control of read-out/write-in processing for an IC card by an application unit stored on either apparatus, but it does not at all concern whether an application unit (program) stored in an IC card reading/writing apparatus (integrated circuit card interface device) can be deleted from, or an application unit can be added to, the IC card reading/writing apparatus by operably connecting the IC card reading/writing apparatus to an integrated circuit card or a host device, as does the programming mode of Claim 57.

As can be appreciated from the above remarks, Nara and Tanaka do not teach or suggest, alone or in combination, an integrated circuit card interface device as recited in Claim 57 and therefore Claim 57 is allowable over the teaching of Nara and Tanaka. Further, Claims 58-67, which each depend on Claim 57, either directly or indirectly, are allowable as dependent on an allowable claim.

Claim 77 depends on Claim 69 and therefore includes the limitations of that claim. As discussed above, Nara does not teach or suggest an integrated circuit card interface device as recited in Claim 69. Nor does Tanaka appear to teach or suggest, either alone or in combination with the teaching of Nara, the aspects of an integrated circuit card interface device recited in Claim 69 that are not taught or suggested by Nara. Thus, Claim 77 is allowable over the teaching of Nara and Tanaka.

In view of the foregoing, it is requested that the rejection of Claims 57-67 and 77 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

Claims 2-9, 41, 43-54 and 57-77 were pending and were rejected. In view of the foregoing, it is requested that Claims 2-9, 41, 43-54 and 57-77 be allowed. If the Examiner wants to discuss any aspect of this application, the Examiner is invited to telephone Applicants' undersigned attorney at (408) 945-9912.

I hereby certify that this correspondence is being transmitted via facsimile to the U.S. Patent and Trademark Office, Group Art Unit 2194, facsimile number (571) 273-8300, on January 24, 2006.

1-24-06 David R. Graham
Date Signature

Respectfully submitted,

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